

Developing Young Pitchers

Don Zeyen approached me a few weeks ago and asked me to develop a general program that might help the Prior Lake coaches understand and teach proper pitching fundamentals and mechanics to their players. I strongly believe that implementing a program will reduce the likelihood of injury, and allow for consistency and development. The following information is a compilation of several articles, opinions and personal observations. I hope this will help us help the kids, as well as the program. Please contact me anytime with questions or comments.... I hope to see all the kids pitch this year, and will be available to work with your teams individually.

Pitch type, pitch count, and pitching mechanics have a direct impact on young players. Risk of shoulder and elbow injury can be attributed to each of these factors. Researchers from ASMI (American Sports Medicine Institute) followed 476 baseball pitchers ages 9-14 during the 1999 spring season. Elbow pain was reported by 28% of the pitchers, while shoulder pain was reported by 35%. The study evaluated the relationship between the types of pitches thrown, and shoulder or elbow pain. Pitchers in the 9-14 age bracket who threw sliders were 86% more likely to experience elbow pain during the season. Pitchers who threw curve balls were 56% more likely to experience shoulder pain during the season. On the other hand, pitchers who threw change-ups were 12% less likely to experience elbow pain and 29% less likely to experience shoulder pain. The study also found that as pitch counts increased, the number of cases of elbow and shoulder pain also increased. At the 75-99 pitch count range, the risk of shoulder and elbow pain increased by 52% and 35% respectively. The consensus of the coaches, doctors and physical therapists was for organizations to establish a pitch count at each level, as well as limit ages 9-12 to throwing only fastballs and change-ups.

Recommendations:

Based upon its expertise and review of existing studies, the USA Baseball Medical & Safety Advisory Committee makes the following recommendations for minimizing a pitcher's risk of future serious arm injury. Coaches and parents should listen and react appropriately to a young pitcher when he/she complains about arm pain. A pitcher who complains or shows signs of fatigue or arm pain should be removed immediately from pitching. Parents should seek medical attention if pain is not relieved in four days or if the pain recurs immediately the next time the player pitches.

9-10 year old pitchers: 50 pitches per game 75 pitches per week

11-12 year old pitchers: 75 pitches per game 100 pitches per week

13-15 year old pitchers: 75 pitches per game 125 pitches per week

Pitch count limits pertain to games only. No backyard pitching after the game. Rest arm the following day, and begin light throwing and long toss on the second/third day. Further, pitchers should not throw curveballs and sliders in competition until their bones have matured (indicated by puberty) typically around 13 or 14 years of age. In order to succeed, a young pitcher should focus on good mechanics, a good fastball and change-up, and of course, CONTROL.

Pitching Mechanics and Control

The coach cannot expect immediate miracles from their pitchers, as control is the result of practice and of good mechanics. You cannot expect your pitcher to throw once a week and give you the results you both aspire to! Each time they pick up the ball, they should work on their pitches, mechanics and control. Playing long toss helps with arm position, strength, and stretching. Throwing batting practice helps with control, confidence and anxiety. Playing catch helps with accuracy, arm-strength, and pitch selection.

The following mechanics are somewhat general, but a good starting point for all your pitchers:

Grip: Most pitching grips use two fingers on top of the ball, with the thumb underneath. A young pitcher with small hands may use three fingers across the ball. Have a firm, but relaxed grip. Avoid “choking the ball” by allowing for space between the ball and thumb. Use a four-seam grip for speed and control, and a two-seam grip for more movement.

Stance: Keep both feet on the rubber, or move your stride foot of and behind the rubber. Stand comfortably with your shoulders and hips square to the plate and your weight slightly more on your throwing foot. Hold the balls in your glove or throwing hand (glove helps disguise pitches; hand allows quicker reactions if someone moves from a base).

Wind-up and Pivot: Move the hands up and stride foot straight back behind the rubber to generate rhythm and momentum. Keep your eyes on the plate! Your hands may move to the top of your head, remain gathered near your chest or move to a comfortable position between the extremes. Turn your pivot foot 90degrees so that the contact foot comes to rest in contact with the front edge of the rubber. (Shoulder should be aligned with the plate.) Lift your stride leg straight up, with the thigh and shin forming a 90-degree angle, and keep your head centered over the front side of your pivot foot for good balance.

Gathered Position: Maintaining balance over the pivot foot is essential during this brief pause and momentum-gathering phase. Head remains centered over the front side of the pivot-foot; eyes are level and focused at the plate. Shoulders are horizontal and square to the plate. Glove-side hip points to the plate and hands are together in the area between the chest and belly button. Elbows are relaxed and pointing down towards the ground. Stride-leg thigh is approximately parallel with the ground, and stride foot is relaxed with toes pointing to the ground. From this “balance position,” the body drops downward in preparation to “push-off” toward the plate

Stride: As the pitcher strides forward, the hands break and the momentum is transferred toward home plate (slow and controlled half of the body). A relaxed stride foot leads straightforward, feeling for the ground. Note: Stride length is approximately 80%-90% of the pitchers height. (A line in the dirt from the pivot foot to the landing area can be used to keep the player on the target line.) Both thumbs rotate down as the hands break. The ball separates from the glove with the palm of the throwing hand facing down and fingers on top of the ball. The path of the throwing arm to full extension is down, back, around and up through release. Glove-side hip remains closed and pointing toward the plate, until the stride foot is down and the torso begins rotating. Head and eyes remain level with the plate. Stride foot should land flatly on the ball of the foot with toes pointing at the plate; left knee must bend on impact to absorb the weight transfer from the push-off. As the foot lands, hips open to the plate to allow the body to bend forward.

Follow-through: The lead arm rotates inward and down, bringing the lead arm elbow back to the left hip. The throwing arm continues smoothly through full extension, while the pivot foot lands softly, squaring the body with the plate. Chin should be slightly over the landing knee. This will insure good balance, momentum, and follow-through. A smooth and relaxed arm action is essential for good rhythm and control. Once the arm has reached full extension the hand comes by the head above the ear with the palm up, trailing the elbow and wrist. As the ball is released in front of the head (release point from which fastball, curveball, slider etc., are differentiated), the wrist and fingers pull down hard for maximum spin, velocity, and movement. After the ball is released, the arm is pulled down and across the front of the body and finishes up outside the left knee.

Common Problems with Control:

Low Elbow: Pitchers that throw with a low elbow, or elbow below shoulder height, often experience not only sore elbows, but control issues. Pitches are usually high in the strike zone. Pitchers must throw “downhill” and stay on top of the ball.

Poor Balance: Although it is a good idea to have the pitchers demonstrate the “balance position,” remember to do so in a rhythmic fashion. We never want to stop momentum. However, rushing to the plate can cause the arm to drag behind the body, and risk injury and/or control. Always remember a smooth and balanced approach to pitching.

Aiming the Ball: The pitcher must not let up to get the ball over the plate. They should concentrate, reach back and throw hard. Control is only effective with good speed on the ball.

Throwing Across the Body: Draw an imaginary line from the push-off foot to the center of home plate. The striding foot should land four to six inches to the first base side of that line.

Poor Follow-Through: Check the weight transfer, and see that the throwing hand finishes in the proper position. This may be exaggerated by having the pitcher touch their shoelace to ensure that they finish low, with their head slightly over the left knee.

I hope that this information will be beneficial. Pitchers and coaches at various levels and age groups have different needs and abilities. Thus, I realize that there are many elements of pitching that could be discussed in the future i.e., pitching strategy, holding base-runners, throwing from the set position, playing the position, release points, increasing velocity etc. Please feel free to call me anytime with your questions or input. I look forward to working with all the coaches and kids.

Sincerely,

MIKE B. (952-226-2062)

If you would like to visit some good websites let me know!

Websites for additional information:

www.asmi.org

www.usabasebaseball.com

www.pitching.com

www.saskbaseball.com